



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,069	05/06/2005	Yasuo Iimori	Q87540	2759
65565 7590 06/25/2007 SUGHRUE-265550 2100 PENNSYLVANIA AVE. NW WASHINGTON, DC 20037-3213			EXAMINER FREJD, RUSSELL WARREN	
			ART UNIT 2128	PAPER NUMBER
			MAIL DATE 06/25/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/534,069

Applicant(s)

IIMORI, YASUO

Examiner

Russell Frejd

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-15 is/are allowed.
- 6) ☒ Claim(s) 1, 7, 8 and 12 is/are rejected.
- 7) ☒ Claim(s) 2-6 and 9-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5.6.05, 8.15.05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

In re Application of: limori

***Examination of Application #10/534,069***

1. Claims 1-15 of application 10/534,069, filed on 6-May-2005, are presented for examination.

***Specification Objections***

2. The disclosure is objected to because several of the lines in the specification contain words that are compressed to form a continuous line of letters, which renders the line difficult to read and understand. Examples are, but not limited to: [p. 1, Ins. 10 and 24], [p. 9, ln. 18].

Also, the phrase "clamped at least two points" [p. 1, l. 9] appears to be grammatically incorrect, and is understood to mean "at least at".

***Claim Rejections under 35 U.S.C. § 112, 2nd Paragraph***

3. Claims 1, 7, 8, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The following is a list of the specific rejections:

claim 1	line 2	The phrase "bending life span(s) of a plurality" is vague.
claim 7	line 3	The phrase "from being bent induced by" is vague.
claim 8	line 3	The phrase "natural frequencies of the plurality of wires are computed, respectively" is vague and indefinite as it is unclear if the natural frequencies is referring to each individual wire or the plurality of wires (as a whole).

In re Application of: limori

claim 12      line 5      The phrase "of typical atmosphere" is vague and indefinite.

### ***Claim Objections***

4.      Claims 2-6 and 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Allowed Claims***

5.      Claims 1-15 are deemed allowable over the prior art of record at this time, pending resolution of any rejections noted above, because the prior art does not specifically claim a bending life predicting method of predicting bending life span(s) of a plurality of wires induced by vibration, at least two points of each of the plurality of wires being constrained, including:

pre-storing each predicting function representing relationships among atmosphere temperatures, stresses and bending life spans for the plurality of wires;

setting the plurality of wires, the atmosphere temperatures, pre-vibration shapes of the plurality of wires, and constraint conditions of the plurality of wires;

forming finite element models of the plurality of wires by using a finite element method;

calculating natural frequencies for the pre-vibration shapes and calculating stresses in individual finite elements of the finite element models which correspond to the natural frequencies, respectively;

retrieving a maximum stress from the stresses calculated in the vibration analyzing step, for each of the plurality of wires;

In re Application of: limori

reading predicting functions corresponding to the atmosphere temperatures set in the setting step, respectively;

acquiring a bending life span corresponding to the maximum stress of each of the plurality of wires while referring to the predicting functions read out in the predicting function readout step, and obtaining a shortest bending life span from the bending life spans; and outputting the shortest bending life span obtained in the bending life predicting step.

### ***Response Guidelines***

6. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02, 710.02(b)).

**6.1 Any response to the Examiner in regard to this non-final action should be**

**directed to:** Russell Frejd, telephone number (571) 272-3779, Monday-Friday from 0530 to 1400 ET, **or** the examiner's supervisor, Kamini Shah; telephone number (571) 272-2279. Inquires of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist (571) 272-2100.

**mailed to:** Commissioner of Patents and Trademarks  
P.O. Box 1450, Alexandria, VA 22313-1450

**or faxed to:** (571) 273-8300

Hand-delivered responses should be brought to the Customer Service Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

**Date:** 26-May-2007



**RUSSELL FREJD  
PRIMARY EXAMINER**